

REMARKS

Claims 22-38 remain pending in this application. Claims 22, 29, 30, 34, 37, and 38 are independent. Claims 22 and 38 have been amended. No claims have been added or cancelled by this Amendment.

No new matter is involved with any claim amendment, as support may be found throughout the originally-filed disclosure, including the originally-filed claims.

I. Unpatentability Rejection over Salmela in view of Nordstrand and Seppanen

Withdrawal of the rejection of claims 22-27 and 29-38 under 35 U.S.C. §103(a) as allegedly being unpatentable over Salmela et al. (WO 98/30056) ("Salmela") in view of Nordstrand (US 6,334,052 B1) and Seppanen et al. (US 5,903,832) ("Seppanen") is requested.

At the outset, Applicant notes that, to establish a *prima facie* case of obviousness, three basic criteria offer useful insights. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference must teach or suggest all the claim limitations.¹ Further, the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure.² The Supreme Court recently held that it is necessary, *inter alia*, for a court to look to interrelated teachings of multiple patents in order to determine whether there was an apparent reason to combine the known elements in the claimed. In this regard, the Court held "[t]o facilitate review, this analysis should be made explicit."³ "[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness."⁴

¹ See MPEP §2143.

² *In re Vaack*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991) and *See* MPEP §2143.

³ *KSR Int'l. Co. v. Teleflex Inc.*, 550 U.S. ____ (2007) (*see* p. 14).

⁴ *See Id.*, citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006).

The pending independent claims 22, 29, 30, 34, and 37 clearly define location areas, some of which are defined as exclusive location areas, and also localized service areas. Claim 38 defines cells providing specific services instead of localized service areas.

As discussed in greater detail below, Salmela teaches that location areas are different from localized service areas. Further, it appears that Salmela's localized service areas correspond to the claimed localized service areas. However, Salmela fails to disclose "defining some of the location areas to be *exclusive* location areas", and any feature relating thereto.

A. Deficiencies of the Applied Art with Respect to the Independent Claims

1. Independent Claim 22

The applied art, Salmela, Nordstrand, and Seppanen, either alone or in combination, does not teach or suggest a method for deciding whether a mobile station used by a subscriber is allowed to camp in a cell of a mobile communications system comprising cells, wherein the method includes, *inter alia*, "defining location areas each associated with a respective Location Area Code (LAC) and comprising a group of cells so that each cell of the mobile communications system belongs to a location area, wherein within each location area, the mobile station may move without updating its location, *defining localized service areas each associated with a respective Localized Service Area identification (LSA-ID)*, wherein the localized service areas may overlap and be discontinuous so that a cell may belong to one or more localized service areas or to none of the localized service areas, and a localized service area may comprise cells belonging to different location areas so that when the mobile station is moving within the localized service area a location update may be triggered because the location area changes, *defining some of the location areas to be exclusive location areas each exclusive location area being identified with a respective LAC, an exclusive location area comprising exclusive cells for which an exclusive service condition is defined, so that a location area is either an exclusive location area or a non-exclusive location area*; broadcasting an LAC of a cell and, if the cell belongs to at least one localized service area, broadcasting an LSA-ID of each localized service area to which the cell belongs; receiving, via the cell, a request for location update which initiates a location update procedure for updating the subscriber's location to a new location area and includes a LAC for the new location area to which the subscriber would like to update;

checking during the location update procedure whether the new location area indicated by the LAC is defined as an exclusive location area; and if the new location area is an exclusive location area, using the exclusive service condition of the cell in determining whether or not the subscriber is allowed to camp in the cell, allowing the mobile station to camp in the cell by accepting the location update if the subscriber is allowed to camp in the cell, and preventing the mobile station from camping in the cell by rejecting the location update if the subscriber is not allowed to camp in the cell, if the new location area is not an exclusive location area:

checking whether or not the subscriber has localized service information which comprises at least one localized service area identification (LSA-ID) with information about the subscriber's access rights outside the LSA-IDs; if the subscriber has the localized service information, using it to determine whether or not the subscriber is allowed to camp in the cell; and if the subscriber has no localized service information, allowing the subscriber to camp in the cell," as recited in independent claim 22 as amended (*emphasis added*).

2. Independent Claim 29

The applied art, either alone or in combination, does not teach or suggest a method for deciding whether to trigger a location update by a mobile station used by a subscriber in a mobile communications system comprising cells, and location areas each associated with a respective Location Area Code (LAC) and defining a group of cells so that each cell belongs to a location area, wherein within each location area, the mobile station may move without updating its location, the mobile communications system further comprising localized service areas each associated with a respective Localized Service Area identification (LSA-ID), wherein the localized service areas may overlap and be discontinuous so that a cell may belong to one or more localized service areas or to none of the localized service areas, and a localized service area may comprise cells belonging to different location areas so that when the mobile station is moving within the localized service area a location update may be triggered because the location area changes, wherein the method includes, *inter alia*, "storing each LSA-ID of a subscriber using the mobile station if the subscriber has at least one localized service area; storing the LAC of a current cell serving the mobile station; moving from the current cell to a new cell; receiving in a broadcast of the new cell the LAC of the new cell; receiving in the broadcast the LSA-ID of each localized service area the new cell belongs to if the new cell belongs to at least to one localized service area; *receiving in the broadcast an indication of exclusive access (EA)*,

indicating that a cell is an exclusive cell that belongs to an exclusive location area if the new cell is an exclusive cell for which an exclusive service condition is defined; comparing in the mobile station the LAC of the new cell with the stored LAC, and if they are not the same, checking, whether the broadcast of the new cell contained the EA, if the broadcast contained the EA comparing the LSA-IDs of the new cell with the subscriber's LSA-IDs and if there is a match, sending a location update request, or if there is no match or if the subscriber has no LSA-IDs, trying to find a suitable cell in which to camp and if a suitable cell is not found, entering a limited service state in the mobile station, if the broadcast contained no EA, sending a location update request to the system," as recited in previously-presented independent claim 29 (emphasis added).

3. Independent Claim 30

The applied art, either alone or in combination, does not teach or suggest a system that includes, *inter alia*, "mobile stations; and **a network comprising: exclusive cells and other cells via which a mobile station may be connected to the network**, location areas each identified by a Location Area Code (LAC) and defining a groups of cells so that each cell belongs to a location area within which mobile stations may move without updating their location, **wherein at least one of the location areas identified by the LAC is defined to be an exclusive location area comprising at least one exclusive access cell for which an exclusive service condition is defined**, and localized service areas each associated with a respective Localized Service Area identification (LSA-ID), wherein the localized service areas may overlap and be discontinuous so that a cell may belong to several localized service areas or to none of the localized service areas, and a localized service area may comprise cells belonging to different location areas so that when a mobile station is moving within the localized service area a location update may be triggered because the location area changes, the network being configured to broadcast in each cell the LAC of a cell and, if the cell belongs to at least one localized service area, the LSA-ID of each localized service area the cell belongs to, wherein each mobile station is configured, in response to receiving a LAC of a new location area in a cell broadcast, to send to the network a location update request which includes the LAC of the new location area and information about the subscriber using the mobile station, **and the network is configured to access information about exclusive location areas and, in response to receiving a location update request of a mobile station, to check whether the location area in the location update request and indicated**

by LAC is defined as an exclusive location area and if it is, to use the exclusive service condition of the cell to determine whether or not the subscriber is allowed to camp in the cell, and to reject the location update if the subscriber is not allowed to camp in the cell; and if the location area is not an exclusive location area to check whether or not the subscriber has localized service information comprising at least one localized service area identification (LSA-ID) with information about the subscriber's access rights outside the subscriber's LSA-IDs, if the subscriber has the localized service information, to use it to determine whether or not the subscriber is allowed to camp in the cell, and if the subscriber has no localized service information, to allow the subscriber to camp in the cell," as recited in previously-presented independent claim 30 (emphasis added).

4. Independent Claim 34

The applied art, either alone or in combination, does not teach or suggest a network element for a mobile communications system taking part in location update procedures between the system and a mobile station, said system comprising cells, and location areas each associated with a respective Location Area Code (LAC) and defining a groups of cells so that each cell belongs to a location area, wherein within each location area the mobile station may move without updating its location, which LAC the system is configured to broadcast in a cell broadcast, *wherein at least one of the location areas identified by the LAC is defined to be an exclusive location area comprising at least one exclusive access cell for which an exclusive service condition is defined*, the system further comprising localized service areas each associated with a respective Localized Service Area identification (LSA-ID), wherein the localized service areas may overlap and be discontinuous so that a cell may belong to one or more localized service areas or to none of the localized service areas, and a localized service area may comprise cells belonging to different location areas so that when the mobile station is moving within the localized service area a location update may be triggered because the location area changes, the system being further configured to broadcast in the cell broadcast an LSA-ID of each localized service area the cell belongs to, if the cell belongs to at least one localized service area, *wherein the network element comprises a processor configured, inter alia, "to store or to have access to information about the at least one location area defined to be an exclusive location area*, to have access to subscribers' localized service area information and localized service information on cells, and, in response to receiving from a mobile station a

location update request to a cell belonging to a location area identified by a LAC in the request, *to check whether the location area indicated by the LAC is defined as an exclusive location area and if it is, to use the exclusive service condition of the cell to check whether the subscriber is allowed to camp in the cell, and to reject the location update if the subscriber is not allowed to camp in the cell and if the location area is not an exclusive location area to check whether or not the subscriber has localized service information comprising at least one LSA-ID with information about the subscriber's access rights outside the LSA-ID*, if the subscriber has the localized service information, to use it to determine whether or not the subscriber is allowed to camp in the cell, and if the subscriber has no localized service information, to allow the subscriber to camp in the cell," as recited in previously-presented independent claim 34 (*emphasis added*).

5. Independent Claim 37

The applied art, either alone or in combination, does not teach or suggest a mobile station for a mobile communications system comprising cells, and location areas each associated with a respective Location Area Code (LAC) and defining a groups of cells so that each cell belongs to a location area, wherein within each location area the mobile station may move without updating its location, the system further comprising localized service areas each associated with a respective Localized Service Area identification (LSA-ID), wherein the localized service areas may overlap and be discontinuous such that a cell may belong to one or more localized service areas or to none of the localized service areas, and a localized service area may comprise cells belonging to different location areas so that when the mobile station is moving within the localized service area a location update may be triggered because the location area changes, wherein the mobile station includes, *inter alia*, "a processor and a memory operatively connected thereto, wherein the memory contains an LSA-ID associated with each localized service area for a subscriber using the mobile station, *wherein the processor is configured: to support localized service area definitions, to access the LSA-ID in the memory, to receive broadcast information about a location area of a cell, the information including the LAC of the cell, LSA-IDs of each localized service area the cell belongs to if the cell belongs to at least one localized service area, and an indication of exclusive access (EA) if the cell belongs to a location area defined to be an exclusive location area comprising exclusive cells for which an exclusive service condition is defined, and, in response to receiving in the broadcast a LAC of a new location*

area, the LSA-IDs of the cell and the EA, to compare the received LSA-IDs with the subscriber's LSA-IDs, and if there is a match between the received LSA-IDs and the subscriber's LSA-IDs, to send a location update request to the system, or if there is no match or if the subscriber has no LSA-IDs, to try to find a suitable cell in which to camp and if a suitable cell is not found, and to enter a limited service state; and, in response to receiving in the broadcast a LAC of a new location area and LSA-IDs of the cell but no EA, to send a location update request to the system," as recited in previously-presented independent claim 37 (emphasis added).

6. Independent Claim 38

The applied art, either alone or in combination, does not teach or suggest a method for deciding whether a mobile station used by a subscriber is allowed to camp in a cell of a mobile communications system comprising cells, wherein the method includes, *inter alia*, "defining a group of cells so that each cell of the mobile communications system belongs to one location area of a plurality of location areas each location area being identified with a respective LAC, wherein within each location area, the mobile station may move without updating its location; *defining a portion of the plurality of location areas to be exclusive location areas, each of said portion being identified with a respective Location Area Code (LAC), each exclusive location area comprising exclusive cells for which an exclusive service condition is defined, wherein, within each exclusive location area, the mobile station may move without updating its location;* broadcasting an LAC of a particular cell and, if the particular cell provides special services only to some subscribers, broadcasting an localized service area identification (LSA-ID) of each service cell provides; receiving, via the particular cell, a request for location update which initiates a location update procedure for updating the subscriber's location to a new location area and includes a LAC for the new location area to which the subscriber would like to update; *checking during the location update procedure whether the new location area indicated by the LAC is defined as an exclusive location area; and if the new location area is an exclusive location area: using the exclusive service condition of the cell in determining whether or not the subscriber is allowed to camp in the cell, allowing the mobile station to camp in the cell by accepting the location update if the subscriber is allowed to camp in the cell, and preventing the mobile station from camping in the cell by rejecting the location update if the subscriber is not allowed to camp in the cell; or if the new location area is not an exclusive location area:*

checking whether or not the subscriber has subscribed a specific special service with restricted access right; and if the subscriber has subscribed the specific special service, using its restricted access right to determine whether or not the subscriber is allowed to camp in the cell; or if the subscriber has not subscribed the specific special service, allowing the subscriber to camp in the cell, wherein cells providing the same special service are grouped to form a localized service area, which is other than the location areas and the exclusive location areas," as recited in independent claim 38, as amended (*emphasis added*).

Accordingly, since the applied art does not teach or suggest all the claimed limitations, reconsideration and allowance of independent claims 22, 29, 30, 34, 37, and 38 are respectfully requested. In addition, dependent claims 23-28, 31-33, and 35-36 variously and ultimately depend from these allowable independent claims and are submitted as being allowable at least on that basis, without further recourse to the patentable features recited therein.

B. Discussion of the Applied Art

1. Discussion of Salmela et al.

According to the Abstract, Salmela et al. ("Salmela") is purportedly directed to mobile communications system in which localize special services are offered by a method for controlling the local operation of a mobile station (MS) which includes forming a group of special cells from selected network cells, and controlling the operation of the mobile station on the basis of the group. According to the disclosure of Salmela, if the old and/or new cell is a special cell, information on this is transmitted to the mobile station already in a handover command, whereby the mobile station may refuse handover.

Salmela merely discloses a solution for providing localized services in cellular systems. In Salmela, location areas form regions within each of which the mobile station may roam freely without notifying the visiting location register. Additionally, Salmela discloses that a list of special cells may be defined for a subscriber. The cells in this list form a subscriber-specific localized service area that is, by definition, specific to the subscriber. That list of special cells may be utilized to control the operation of the mobile station used by the subscriber. Salmela also discusses several types of special cells, and mentions also control operations restricting the access of the mobile station to some cells.

However, *Salmela fails to disclose, teach or suggest defining some of the location areas to be exclusive location areas each associated with a respective Location Area Code (LAC), an exclusive location area including exclusive cells for which an exclusive service condition is defined.*

The Office Action referred to the localized service areas of Salmela, which are defined as a list of special cells drawn up for a subscriber (for example, page 4, lines 9-10, and 15-16, and page 5, lines 15-16, and page 15, lines 26-33). Thus, the definition is made *for a subscriber* or a subscriber group (page 15, lines 26-28), *and not for a location area* of the network subsystem. A special cell of a location area may then naturally exist in a special service area; however, in Salmela, the other cells with the same location area identifier may or may not belong to the special service area. Thus, a subscriber roaming within a location area may try to camp in special cells and non-special cells without having a trigger to update its location.

Moreover, *Salmela fails to disclose, teach or suggest checking, during a location update procedure, whether a new location area indicated by the LAC is defined as an exclusive location area.* Since no exclusive location areas are defined, such checking is neither discussed nor suggested in Salmela. In fact, the only action implemented during the location update procedure in Salmela is delivery of the list of special cells to the mobile station, *which is clearly not the same as the action implemented during the claimed location update procedure.* Simply put, *delivery of a list of special cells does not correspond with checking a location area type.*

Although Salmela does disclose a checking operation, it occurs at a different stage, *i.e.*, when the mobile station receives a new broadcast cell identifier. The checking is also implemented differently in that the mobile station checks whether the new cell is in its own list of special cells. Thus, *checking a cell identifier does not correspond with checking a location area, as variously claimed.*

Additionally, Salmela fails to disclose or suggest using an exclusive service condition of a cell in determining whether or not the subscriber is allowed to camp in the cell. To the contrary, in Salmela, *any* control operations restricting the user's ability to camp in the cell are made based on a list of cells of a subscriber, *not* on an exclusive service condition that is defined

for a particular cell and governing operations of that cell. A cell identifier itself does not relate to any particular service, and *a list cell identifiers of a subscriber* is clearly not the same as *an exclusive service condition of a cell*.

Salmela discloses that a cell (identified by cell identity), a location area (identified with LAI), and the localized service area (identified by LSA-IDs) do not correspond to each other, and therefore differ from each other. See, e.g., page 2, lines 3-4, "[t]he geographical area controlled by the visitor location register is divided into one or more location areas LA, within each of which the MS may roam freely without notifying the VLR", and also see page 5, lines 14-18 which states "a special service area is defined for a mobile subscriber by drawing up a list of certain network cells, *i.e.*, special cells, for the subscriber. The list can be utilized in a mobile station or in a fixed network. In the present application, such a special service areas referred to as LSA (Localised Service Area)".

In other words, the "location area" disclosed in Salmela arguably corresponds to the "location area" defined in Applicants' claims, however the "localized service area" in Salmela does not correspond to the location areas defined in Applicants claims.

Salmela also fails to disclose broadcasting an indication indicating that the cell is an exclusive cell that belongs to an exclusive location area. Salmela merely discloses that a base transceiver station may broadcast some cell-specific information, for example a cell identifier or a message indicating that the cell provides a certain special service for the mobile stations in the network. However, since no exclusive location areas are defined, and cells of one location area may be exclusive or non-exclusive, such a message does not give any indication on whether the cell belongs to an exclusive location area.

In the Office Action, the Examiner states that Salmela teaches defining some of the location areas to be localized service areas. However, ***Salmela does not teach that a location area is defined to be localized service area*** (page 4, lines 1-12 disclose subscriber-specific localized service areas comprising selected network cells; page 5, lines 14-18 discloses the above definition for mobile station-specific localized service area; page 7, lines 26-28 discloses mobile station-specific localized service area; and page 8, line 6-12 discloses a definition of the special cell). In addition, and assuming, *arguendo*, that Salmela taught or suggested the above features,

which it does not, Applicants' claimed feature relates only to location areas which do *not* correspond to localized service areas.

Support for Applicants' position can be found in Salmela at least at, for example, page 2, lines 3-4 which states "[t]he geographical area controlled by the visitor location register is divided into one or more location areas LA, within each of which the MS may roam freely without notifying the VLR"; and page 2, lines 8-9, "location area identifier LAI"; and page 5, lines 14-18, "a special service area is defined for a mobile subscriber by drawing up a list of certain network cells, i.e., special cells, for the subscriber. The list can be utilized in a mobile station or in a fixed network. In the present application, such a special service area is referred to as LSA (Localized Service Area)".

Further, Salmela teaches that special service area is defined by drawing up a list of certain network cells, thereby clearly teaching contrary to defining some of the location areas to be localized service areas - the language used by the Examiner - and fails to teach defining some of the location areas to be exclusive location areas - the language used in claims.

However, if the Examiner considers that Salmela's localized service areas correspond to the claimed exclusive location areas, Applicants respectfully request that the Examiner identify specifically where Salmela also teaches the claimed localized service areas.

The Office Action admitted the deficiencies of Salmela in failing to teach or suggest determining the possibility of allowing a mobile station subscriber to camp in a cell, and alleged that Nordstrand remedies this deficiency. Applicants respectfully traverse this characterization of the applied art.

2. Discussion of Nordstrand et al.

According to the Abstract, Nordstrand et al. ("Nordstrand") is purportedly directed to a subscription-based mobile station in which subscription-based information in a mobile telecommunications system is utilized to control idle mode operations of a mobile station. In one aspect, cell-related information is broadcast from cells. A mobile station then uses the received cell-related information to determine whether any given cell is part of a predefined service area that is reserved for use by only certain subscribers to the exclusion of other subscribers. The

cell-related information may be a cell identifier that uniquely identifies a corresponding cell, or it may alternatively be a service area identifier that uniquely identifies a service area that comprises one or more cells. In either case, the mobile terminal makes its determination by accessing a memory such as a Subscriber Information Module (SIM), and retrieving therefrom stored information that defines the predefined service areas. In another aspect, the SIM may store information identifying preferred cells for the mobile station to camp on during idle mode.

Nordstrand teaches subscriber-specifically defined service areas (apparently corresponding to local service areas of Salmela), but is totally silent on location updating and location areas. Accordingly, Nordstrand fails to teach or suggest determining or checking, in the mobile station, whether the mobile station is allowed to camp in the cell, in response to receiving a new location area identity LAC and the indication EA, as variously claimed in the pending independent claims.

Further, *Nordstrand fails to teach or suggest the concept of exclusive location areas, as well as failing to teach or suggest sending a location update request if camping is allowed after the mobile station has determined whether camping is allowed.* In Nordstrand, the cell broadcasts an "exclusive access" indicator. By using their specific subscriber-based information, some mobile stations may then ignore a "cell barred" indicator, and proceed with the cell re-selection procedure.

Since, according to conventional techniques, a mobile station may move within a location area from one cell to another cell of the location area *without location update, finding a suitable cell in Nordstrand does not trigger sending a location update request.* In Nordstrand, the location update request is triggered according to conventional techniques, *i.e.*, when a new location area code/identifier is received. Thus, Nordstrand fails to teach or suggest "if camping is allowed, sending a location update request", as variously claimed in independent claims 10 and 19.

However, as would be known to a person having skill in the art, cell re-selection relates to *movement* of a mobile station from one cell area to another, and it may lead to changeover, handover, or location updating. Nevertheless, *the decision to continue cell re-selection procedure clearly does not correspond with sending a location update procedure.*

Thus, in Nordstrand, a location update may or may not take place after a detected "cell barred" indicator, disregarding the check whether the camping to the particular cell is allowed or not.

Nordstrand discloses subscriber-specifically defined service areas that correspond to Salmela's localized service areas and to the claimed localized service areas. The limited service areas disclosed in Seppanen (discussed below) also corresponds to the Salmela's localized service areas, and to the claimed localized service areas, if non-public networks are considered to be part of a public network.

The Examiner has stated that existence of a localized service area in a cell means that the location area the cell belongs to correspond to the claimed exclusive location area. As described above, Applicants disagree with the interpretation. However, if the Examiner maintains his interpretation with respect to Salmela, then the same specific identification should be applied to the teachings of Nordstrand, i.e., if the cell broadcasts information on service area(s), the cell belongs to an exclusive location area, and column 7, lines 22-29 and col. 8, lines 10-17 teaches the procedure that takes place when a location area is an exclusive one.

Therefore, using the Examiner's interpretation that localized service areas correspond to exclusive location areas, *Salmela and Nordstrand teach that the following situation defined in the claims cannot happen:*

if the new location area is not an exclusive location area:
checking whether or not the subscriber has localized service
information which comprises at least one localized service area
identification (LSA-ID) with information about the subscriber's
access rights outside the LSA-IDS,

This situation could not happen under the Examiner's reasoning, since the Examiner states that if there are LSA-IDs, there is always an exclusive location area, i.e., LSA-IDs are not used in non-exclusive location areas and therefore cannot be checked in non-exclusive location areas. However, as expressed in previous responses, for one skilled in the art, a location area, exclusive or not, does not correspond to a localized service area.

3. Discussion of Seppanen et al.

According to the Abstract, Seppanen et al. ("Seppanen") is purportedly directed to a mobile terminal having enhanced system selection capability in which a single, prioritized list of all available networks (*i.e.*, all public, residential, and private networks). Access to the various networks is then based on the user's needs. A first type of access is an automatic access, that requires little or no user involvement. A second type of access is to a user-specified network. A third type of access is to a user-specified service (*e.g.*, data, fax, e-mail, etc.) that is supported by at least one of the networks. The mobile station can search for additional networks, and can also search for additional networks that support only a specified type of service, or for a network that supports a service not supported by networks that are already in the list. All of the networks can be searched at once so that the user can readily make a selection from the single, prioritized network list. The network priorities are user programmable by moving network names up and down in the list using a mobile station user interface, such as the mobile station's keypad. The higher the network name is placed in the list, the higher is the priority of the network.

Seppanen merely discloses that a mobile terminal searches for a suitable network and if a suitable network is not found, enters the limited service state. However, ***a suitable network is not the same as a suitable cell***. Thus, Seppanen fails to disclose that if a suitable cell is not found, the mobile terminal enters the limited service state.

Moreover, because Nordstrand teaches continuing the cell selection/re-selection process during the location update (see, Nordstrand, Figures 4 and 5) if a suitable cell is not found, a system resulting from the combined teachings of Nordstrand and Seppanen would merely provide a solution in which, if a suitable network is not found, the mobile station enters the limited service state but if a suitable network is found, the mobile terminal tries to find a suitable cell, and if a suitable cell is not found, the mobile terminal continues the cell selection/reselection process. That operation is contrary to Applicants' invention as variously recited in claims the independent claims.

Further, since neither Nordstrand and Seppanen do not teach or suggest location areas or any related feature, they necessarily fail to teach or suggest any feature of the independent claims, *e.g.*, the mobile station being arranged to receive broadcast information about a location

of the cell, the information including the LAC of the cell. In the Office Action, the Examiner states that a cell identifier corresponds to location area code/identifier. However, they are separate identifiers that identify different things.

Finally, Salmela teaches either to select one of the permitted cells or to connect to one of the forbidden cells, if it cannot otherwise receive network services (Salmela, page 14, lines 15-20). Therefore, by combining Seppanen with Salmela, one skilled in the art would merely provide a solution in which, if a suitable network is not initially found, the mobile station enters the limited service state, but if a suitable network has been found, the mobile terminal tries to find a suitable cell, and *if a suitable cell is not found, instead of entering a limited service state, the mobile station would camp to an exclusive cell*. Another possible solution based on the combined teachings would have been that, if a suitable network is not found, then the mobile station camps in a non-suitable network. However, that too is contrary to what is claimed in the independent claims. Therefore, the independent claims above and their respective dependent claims are patentable over Salmela in view of Nordstrand and Seppanen.

C. Discussion of Applicants' Disclosure

By way of background, one or more embodiments of Applicants' disclosure are directed to a mobile communications method, network, network element, and mobile station in which exclusive location areas comprising exclusive cells are defined in order to separate cells from the mobile stations not belonging to the user group allowed to camp in the cell, and still to allow emergency calls for all mobile stations. During location update, the system checks whether the cell belongs to an exclusive location area and, if it does, the system determines whether or not the subscriber is allowed to camp in the cell.

Such special service areas are commonly referred to as localized service areas (LSA), and the concept of LSA extends the operators' capability to offer different service features to subscriber or subscriber groups, different tariffs, and different access rights, depending on the location of the subscriber. One feature of the concept of LSA is "exclusive access" (EA). EA attributes may be managed as part of cell management. An exclusive access cell is a cell where only mobile stations having the same exclusive access information as the cell are allowed to camp. With the EA concept, it is possible to guarantee that the members of a user group are the

only users of the radio channels (physical resources) within a cell. In order to support exclusive access, other users' mobile stations must be prevented from camping in that cell. Emergency calls, however, should be allowed in a limited service state for every mobile station in the exclusive access cell.

In one or more aspects of Applicants' disclosed and claimed invention, specific exclusive location areas are used comprising exclusive cells, *i.e.*, cells with restricted access. Separate location areas are used for the normal cells, *i.e.*, non-exclusive cells. ***With such location areas, it is guaranteed that when entering a location area, location update is triggered.*** During the location update procedure, the subscriber's right to access the cell is determined. If the subscriber is not a member of the user group allowed to camp in an exclusive cell, the location update will be rejected. However, the rejection of location update will still allow emergency calls to be placed in a limited service state.

As further background, Applicants' disclosure at ¶ [0004] discusses the fact that mobile stations not supporting LSA are not impacted by local service areas, and ¶ [0010] discloses an embodiment of Applicants' disclosure that uses a location areas and location area updates in a procedure that determines a mobile station's right to access the cell.

Accordingly, withdrawal of the rejections and allowance of claims 22-27 and 29-38 are respectfully requested.

II. Unpatentability Rejection over Salmela, Nordstrand, Seppanen and Rune

Withdrawal of the rejection of claim 28 under 35 U.S.C. §103(a) as allegedly being unpatentable over Salmela in view of Nordstrand, Seppanen, and Rune (US 6,212,390) is requested. The legal requirements for unpatentability have been discussed above. The deficiencies of Salmela, Nordstrand, and Seppanen have been discussed above with respect to independent 22, from which claim 28 depends.

The Examiner admits that Salmela, Nordstrand, and Seppanen are deficient with respect to providing a teaching or suggestion of rejecting a location update for the reason that "roaming not allowed in this location area," and alleges that Rune makes up for this admitted deficiency. Applicants traverse the Examiner's characterization of the applied art, as discussed below.

A. Discussion of Rune

According to its abstract, Rune is directed to dividing a cellular mobile communications system into general geographic areas. The cellular system is logically divided into an access provider, having knowledge of and controlling access to the system over the air interface, and a core service provider having subscribers and providing services to those subscribers over the bearer services provided by the access provider. The core service provider chooses some general area within which a particular service is to be provided or within which access is to be restricted. This information is transmitted to the access provider who then maps this information onto the cellular system, thereby determining which cells within the network lie within the area designated by the core service provider.

Whether or not Rune teaches that for which the Examiner offers it, proposition with which Applicants do not necessarily agree, Rune does not make up for the previously-identified deficiencies of Salmela, Nordstrand, and Seppanen with respect to independent claim 22, from which claim 28 depends.

Accordingly, dependent claim 28 is submitted as being patentable at least on that basis, without further recourse to the further allowable subject matter recited therein.

III. Conclusion

All rejections having been addressed, Applicant submits that each of pending claims 22-38 in the present application is in immediate condition for allowance. An early indication of the same would be appreciated.

In the event the Examiner believes that an interview would be helpful in resolving any outstanding issues in this case, the Undersigned Attorney is available at the telephone number indicated below.

For any fees that are due during the pendency of this application, including fees for extensions of time, please charge Deposit Account Number 03-3975 from which the Undersigned Attorney is authorized to draw. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Date: April 10, 2009

Respectfully submitted,

Electronic Signature: /Larry J. Hume/

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Attachment: Petition for 1-Month Extension of Time